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ELECTIVE SUBJECTS IN THE HIGH-SCHOOL CURRICULUM¹

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The subject of high-school electives has been actively discussed in educational gatherings for the last decade. These discussions, however, as reported in the educational journals and in the published proceedings of various associations, have been mainly theoretical, and furnish but little testimony as to the actual working of the elective principle in secondary schools. There are two notable exceptions to this general rule. In 1886 the high-school course in Newton, Mass., was so readjusted as to group the subjects of the curriculum into three large classes: first, required subjects—English, history, and the elements of physics and chemistry; secondly, alternative subjects, giving the pupils a choice between either botany and zoölogy, advanced physics and botany, chemistry and mineralogy, geology and economics, psychology and physical geography, ethics and psychology, and logic and astronomy—in any case, requiring a well-defined core of science running through the four years of the course; and thirdly, the freely elective subjects which included all of the mathematical subjects, foreign languages, and drawing. After seven years of work under this system, its results were carefully investigated by Dr. E. J. Goodwin, and embodied in a paper published in the *Educational Review* (February, 1893). Dr. Goodwin concluded that the net results of this new programme were as follows: (1) to increase the interest in required and alternative subjects; (2) to make the work in elective subjects more attentive and enthusiastic; (3) to rectify the mistakes made under the older system through its abortive attempt to determine, once and for all, the capacities and interests of the

¹ A paper read at the meeting of the Illinois High School Principals' Association, November 23, 1907.

pupil the moment that he enters the high school; (4) to increase the average length of school life; (5) to provide greater opportunities for strong and ambitious pupils to do more than the work formerly required; (6) to eliminate the "special" student; and (7) to secure increased support and approval from the patrons of the school. These conclusions were based upon evidence, largely statistical, drawn from the school records.

In 1895, all subjects in the curriculum of the Galesburg, Ill., High School were made elective. Four years later, Superintendent W. L. Steele reported the following results (*Addresses and Proceedings*, N. E. A., 1899): (1) a decrease in the number of pupils dropping out of the high school prior to graduation; (2) closer relations between teachers and pupils growing out of the consultations with regard to electives; (3) an increase in the confidence of the pupils in their teachers and of teachers in their pupils; (4) more cordial relations between high-school teachers and the eighth-grade teachers; (5) an increase of the work done by pupils over the amount required by the older programme; (6) a wide extension of the privileges of the high school to a class of pupils who, under the older system, ended their school life with the eighth grade; (7) an increase in the high-school enrolment of 121 per cent., while the enrolment in the grades, which may be taken as an approximate index of the growth in population, was only 9 per cent.

I have encountered in the literature no records of the actual results of offering high-school electives in which the conclusions were negative in their character. This is not due to the fact that the experiment has never failed, but rather to the fact that it is usually only the successful experiment that finds its way into print—a condition that one must continually bear in mind when judging the results of a reform movement. In education, at least, the limelight of publicity often hides as much truth as it reveals.²

² Negative evidence is not lacking, however, in the college and university field, as witness the following extract from the last annual report of President J. G. Schurman, of Cornell University: "The course in arts is believed (by the students) to be easier than the course in engineering or medicine or law. This disparagement is probably well founded. Arts students have not a definite

This paucity of data with regard to actual results led the writer to address a circular letter to a number of high-school principals throughout the country. In all, one hundred of these letters were sent: (1) to principals of the larger high schools (the principal of one of the high schools in the largest city of each state being commonly selected); (2) to principals of the smaller high schools (chosen at random, one or more for each state, from the list of active members of the N. E. A.); (3) to the principals of four endowed secondary schools; and (4) the same letter, with some additional questions, to six university professors of education.

To these letters, sixty-five replies were received, representing experience in twenty-nine states, which, in turn, represented every section of the country. The majority of the principals replying had had experience with courses offering "free" electives. All, as far as could be learned, had had experience with elective courses. Every type of high school was represented, except the very smallest. Approximately one-half of the replies came from cities of more than fifty thousand inhabitants.

The first question, "What, in your experience, has been the net result of offering "free" electives to pupils of high-school grade?" was answered by fifty-six correspondents. Sixteen of these gave the verdict, "Detrimental;" twenty were inclined to believe that the practice had proved beneficial with some important qualifications to be noted later; twenty declared without qualification that the results had been beneficial.

The second question, "Does the practice of offering 'free' electives tend in any way to place a premium upon 'snap courses'?" was aimed to determine whether this important objection to electives had its basis in experience. It elicited some very definite evidence. Thirty-three said that "snap" courses were encouraged by the practice; seventeen were equally confident that electives did not have this influence; six maintained that they could not judge, owing to the fact that there were no "snap"

goal before them like students in the professional and technical courses, and lazy students take advantage of the elective system, which is peculiar to the course in arts."

courses in their schools; and one was bold enough to assert that an occasional "snap" course is a desideratum in a well-balanced curriculum. Most of those who answered the question qualified their statements, some saying that the practice tended toward the selection of easy courses but that these should always be eliminated; others that the principal could regulate the matter; others that the factor operated in the earlier years but not in the later years of the course.

The third question, "Does the practice tend to break up the coherence (logical or psychological) of the curriculum?" (another strong argument of the opponents of the elective system), brought out less unanimity of opinion. Twelve said that it need not; fifteen that it did not; and twenty that it did. One said, "Yes, but it is better to break up the coherence than to turn pupils out of the high school." Those who discriminated between logical and psychological coherence generally believed the psychological coherence to be preserved because of the continuity of the interest, although the logical continuity was broken. It was further asked if the breaking of the continuity was detrimental to the pupils' development; the prevailing opinion of those who answered was that the influence was detrimental.

The next question drew out some rather more tangible testimony. It was aimed to discover what factors operated most frequently in determining a pupil's choice of an elective subject. Nine motives that seemed likely to operate were stated and the person answering the question was asked to indicate which of these he deemed the most important. In many of the replies, the nine factors were arranged in the order of their supposed influence; in others certain selected factors were named as apparently of equal importance; others named a single factor. In order to reduce the data to numerical form, a value of nine was given to each factor mentioned first on any list when arranged in the order of influence; a value of eight was given to each factor mentioned second: and so on. When two or more factors were stated as equally important, they were all given the same value. The weights were then computed, with the following results:

1. Ease with which a selected subject may be "passed"..... 259 weights
2. Advice of teachers..... 236 weights
3. Recognition by pupil of ultimate value of subject-matter.... 215 weights
4. Intrinsic interest of subject-matter..... 185 weights
5. Parents' opinions..... 175 weights
6. Personal fondness for certain teachers..... 163 weights
7. Tradition in the school or custom among former pupils..... 138 weights
8. Respect for the ability of certain teachers..... 120 weights
9. Peculiar needs of local environment..... 112 weights

It should be said that the factor that stands third on the list, "Recognition by pupil of ultimate value of subject-matter," was interpreted by many to include the recognition of the value of subject-matter for fulfilling college-entrance requirements. Where this was separately or explicitly stated in the replies, an appropriate weight was given to it, with the result that the factor of college-entrance requirements as determining electives should stand after the ninth factor named above, having a weight of 104. Undoubtedly some of the weight attached to the third factor belongs really with college-entrance requirements. The latter factor did not appear in the original list because it was assumed that a pupil who elected subjects in order to fulfil conventional entrance requirements was, in effect, pursuing a prescribed course. This assumption failed to consider the fact that the entrance requirements of the western colleges are much more elastic than those of the eastern colleges, and consequently permit the principle of election to operate.

The last question had direct reference to the relative proportion of prescribed and elective work in an ideal high-school programme. The answers represent almost every possible opinion. Indeed, it is extremely hard to find two of the sixty-six principals in even approximate agreement, except upon points of a very general nature. Only four placed themselves upon record as recommending no "free" electives; of these, two would have a broad range of elective courses. Only one of the sixty-six thought that a single course was sufficient for all pupils. It is hardly necessary to say that his choice fell upon the traditional classical course preparing for college. The remainder would grant some freedom in the choice of subject-matter within courses

that are more or less definitely prescribed in respect of the main line of work. On the other hand, only two cast their votes for a completely elective course in the high school, and these qualify the recommendation in various ways. In general, there is a tendency to grant a minimum of election during the first two years of the course. The trend of opinion is that not more than two-fifths of the work in the first year should be elective, and many say not more than one-fourth or one-fifth. For the third year there is a diversity of opinion, while, for the fourth year, the tendency is toward one-half elective work, with a strong radical wing favoring all elective, and a strong conservative wing favoring from two-thirds to three-fourths prescribed.

With regard to the subject-matter that should be required, there seems to be even a wider difference of opinion. One principal would make English alone requisite upon all pupils; another recommends science alone; another English and mathematics; still another English and manual training; another would add science to English and mathematics; another would add history to these; and there are three among those making definite recommendations who would have English, mathematics, a foreign language, history, and science pursued by all pupils.

From the data presented, it is clear that there is little agreement among high-school men with regard to the value of the elective principle as applied to secondary schools. On the other hand, there are very strong expressions of individual opinion, speaking now of the success, now of the failure, of the principle in actual test. These judgments sometimes counterbalance each other in a very interesting way. For example, the following extracts represent replies from large high schools in cities of more than fifty thousand inhabitants:

1. From my experience of the last eight years with this almost completely elective system, I see no need for greater requirements than we have.

2. We have by no means arrived at any solution of the question of electives. I think that in the immediate past we have gone entirely too far in that direction.

3. Under a well-directed elective system the work required and accomplished in any one course was increased ten to fifteen per cent. . . . The net result in S—— (six years' observation as principal) of the elective

system, under my own supervision, which was careful and thorough, was beneficent.

4. We had for many years a system of substitutions which approached electives. It has been discarded, and we think an election among courses much better.

5. For five years the largest school of this city was in a most thoroughly demoralized condition. The elective system was put in force and carried to its logical conclusion. At present, under a new principal, things are much better; but the educational progress of hundreds of boys and girls was shipwrecked, graduation made easy, honors cheap, and many found themselves after three or four years of work in the high school still two or three years away from possible meeting of college requirements, owing to the fact that they had drifted hither and thither without fixed standards or definite lines of work. It has been my lot to readjust the work of many boys who have been thus shipwrecked.

The diversity of opinion is still more clearly shown in the more theoretical discussions of the problem, which many of the correspondents included in their replies. The interest which this problem has for high-school men is evidenced by the fact that fully one-half of those answering the questions either supported or attacked the elective principle from the standpoint of theory. It has been possible from these replies rather roughly to classify those arguments, both *pro* and *con*, that have made the strongest appeal to men actually engaged in secondary school work. A brief summary of these arguments, with illustrative excerpts from the correspondence, follows:

I. Advocates of the elective principle, reasoning from the psychological point of view, maintain that no single prescribed course, or group of prescribed courses, can adequately develop the capacities of all pupils. They assume that individual variation is extreme, and that no two individuals require the same treatment. This argument is typically represented by the following extracts from the correspondence:

1. Pupils are differentiated in respect to interests and needs; and while this differentiation becomes more marked as development proceeds, still it must be recognized as early as the high-school period. Absolute uniformity of studies in the high school cannot be justified on any other grounds than the insecure one of formal discipline.

2. No one study is essential to development at high-school age. Children differ so enormously that their best interests require (theoretically)

unlimited flexibility in courses of study in order to secure best studies and best order of studies for individual growth.

3. No one can tell just what all ought to have. It is a part of the most important training of the high school to give the pupils opportunity for expressing individual judgment concerning their own needs.

On the other hand, there are some who recognize the weight of the argument for recognizing individual differences, and yet question the efficiency of elective subjects in meeting the need. There are still others who would not admit the validity of the argument, maintaining, apparently, that social stability implies a community rather than a diversity of ideals and interests. The following extract suggests this point of view :

On general principles I am opposed to the "free" elective system. It leads to an over-development of individualism which has already played havoc with many excellent school systems and is destined to do more mischief if it is not speedily checked. There have been strong conservative influences at work protecting the school system against such an educational pandemonium as would, I believe, result from carrying the elective system to the extreme that was first suggested by its great promoter.

II. A second argument in favor of electives is of a more practical nature, although resting at basis upon psychological principles. It assumes that a pupil who determines in some measure his own course of study, will pursue that course with greater enthusiasm, and thus work much more economically and effectively than he would otherwise. While this argument is rather strongly supported by the testimony of actual results (for instance, in the Newton experiment noted above), it is explicitly advanced by very few of the correspondents.

1. The question of attitude of will is more important than any question of logical or psychological arrangement of the curriculum. If election is allowed, and teachers are faithful, pupils adopt a different attitude toward school, the faculty, and the work. Enthusiasm is easy, and this is worth while. I am not sure that the subjects of any of the ordinary curriculums are.

2. The introduction of the elective system has, on the whole, greatly enriched the work of the secondary school. Pupils really apply themselves better when they pursue courses of their own choosing to some extent. I believe, too, that the outcome for the pupil is much better than when he is required to pursue an inflexible programme of studies.

One principal recognizes the weight of this argument, implicitly if not explicitly, when he suggests that the pupil be led to believe that he is making a "free" choice, although, in reality, the whole matter will have been determined for him.

III. A third argument is still more practical in its nature. It assumes that the presence of electives will attract to the high school pupils who might otherwise end their school life with the eighth grade, and keep in the high school pupils who otherwise would leave before the conclusion of the four-years' course. In more than one case, the correspondents admit the defects of the elective system, but maintain that the "softening" tendencies are more than counterbalanced by the increased attractiveness of the high school to eighth-grade pupils and the increased hold that it has upon pupils who would otherwise be tempted to withdraw. The argument in this case is frankly one of expediency.

IV. Very closely related to this practical argument is the more general contention that no single prescribed course or group of prescribed courses can fit all pupils adequately to meet the demands of a social environment that is becoming increasingly complex. This position is taken by a university professor of education:

The American secondary school, in a large way, undertakes to provide useful education for various types of youths from fourteen to eighteen years of age. If the high school fully serves its purpose, it should carefully study the educational needs of the various possible groups of students which it is economically feasible for the school to distinguish. . . . Now the needs of these groups, whether culturally, socially, or vocationally, differ widely. Most of them ought to have English, literature and composition, though for some girls from cultured homes the school, at present, can add nothing to their opportunities. A few (probably destined for college) should have a foreign language, and for four years; a few (and only a few) should have algebra and geometry; more should have arithmetic, modified to their vocational needs (differing for the clerk, the prospective mechanic, the home-keeper); many should have history, drawing, a science, practical economics, and civics. Opportunities for the study of commercial subjects, manual training, agriculture, etc., should be open. In the vocational lines, courses should be quite rigid (so far as vocational work alone is concerned) with a view to producing known kinds of efficiency; but not all students taking, for example, bookkeeping or typewriting should be com-

pelled to follow the strictly vocational courses involving these subjects. I chiefly favor election because in the present state of our knowledge of educational values we have no proof that our traditional and arbitrary prescriptions are of value to the student. All over the United States, for example, girls are studying algebra and geometry, giving thereto a large part of their learning energy. Have we the slightest proof that in this case the results are worth while? For the prospective mechanic or college student, the situation may be quite different. In New York City, where it should be known that most of the students (in those high schools patronized by the wage-earners) will stay only one or two years, every effort is made to have a very large number take Latin. What do we know about the educational value of this subject for these students? The child's guess or the parent's prejudice may be at least as wise as our impersonal prescription. I regard it as sheer impudence on the part of a high-school principal to say what subjects a student must study unless he knows the purposes thereof. . . .

Of course I grant that children have little wisdom in choosing, and parents not much more; but neither has the impersonal and collective tradition which today requires all students to take mathematics and only reluctantly lets a few escape from Latin, and sneakily favors at least three foreign languages, none of which is learned to any satisfactory degree by more than 1 per cent. or other small number of pupils. In other words, the educational possibilities of the high school demand that each pupil find his best place; and, in the absence of any real knowledge on the part of teachers and principals, the pupil can find his place as well as the impersonal programme of the school can show it to him—with the exceptions noted above.

This relative advantage of the elective system, in catering more equitably to social needs, holds a prominent place in De Garmo's defense of electives. (*See Principles of Secondary Education*, p. 176.)

V. Three additional arguments in favor of electives are proposed by one or two correspondents: (1) an elective system permits strong pupils to do more work than they would be permitted to do under a prescribed course; (2) "free" election tends to prevent the condition so often found under a course or group system, compelling a pupil to make a permanent choice at the outset of his high-school work when he is least able to choose intelligently; (3) an elective system permits the emphasis of certain subjects that are peculiarly related to local needs. In respect of the last argument, it should be noted that the reports give comparatively little weight to the factor of the peculiar

needs of the local environment in determining the choice of electives. Indeed, the only pronounced cases are reported from college communities where the presence of a higher institution determines the choice of secondary studies with reference to their entrance value.

The arguments against the elective principle, as gleaned from the correspondence, fall into the following groups:

I. Pupils of high-school age cannot be trusted to choose their subjects wisely. Of a large number of replies that mention this argument, the following extracts are typical:

1. Personally I am in favor of the prescribed course rather than the free elective course. . . . I hold this opinion, first, because the pupils are inexperienced in the various educational fields of study and therefore cannot choose with that wisdom that should be exercised in the outlining of a progressive course of study. I am sure that one of the main purposes of the high school is to open to the pupil the various fields of knowledge so that later he may be able to choose the line that appeals to him as worth while.

2. The ninth-grade pupil cannot safely be allowed to choose freely. . . . The field is comparatively new. He should be trained in the matter of wise choice as he advances in the course.

3. I do not think that superintendents and boards should be too arbitrary in determining what boys should study. Neither do I think that the school authorities should make an absolute surrender to the inexperience and ignorance of boys and parents. Some people in advocating free electives for children have contended that pupils in the grammar schools should be permitted to outline their courses of study. I think such a proposition is monstrous and silly.

4. In the main the choice of experienced and trained elders is more reliable than that of a high-school student. They know the life the student prepares for as he does not.

II. That the elective principle tends unduly to "soften" the curriculum is indubitably apparent from the evidence of the results of the system in its actual working, as indicated in the summary given above. A university professor of education, in advancing this argument as a theoretical objection to electives, adds some interesting testimony from his own experience with high-school graduates:

I am free to confess that the boys and girls who are coming to our colleges to-day have not that depth of knowledge nor that thought power that characterized the boys and girls of ten or fifteen years ago. Whether

this is the product of "free" electives in the high school, or of the effeminizing of our teaching force, or of the spirit of the times, or of other conditions, I cannot definitely say, but I am Germanic enough to believe that, in our desire for quantity and oftentimes for ease, we sacrifice power in the student. Another effect that I have noticed as I have studied schools throughout the various parts of the country, is in the scholastic attitude of the pupils. You do not find that determined spirit that is bound to conquer that I think I used to see when I was in the actual work myself. I have great faith in the after effect of the mastery of the more difficult lines of school study. I do not mean by this that school work should be uninteresting. I simply mean that, to produce the best results, it must be effortful. I would not want to say that electives tend to place a premium upon "snap" courses, yet I feel that there is some truth in it, and I am disposed to believe, as I know from college experience, that elections are often made, not from the educational worth of the subject, but for the regard in which the teacher who is instructing in the subject is held.

III. This argument involves another, more general in its nature. The principle of election assumes that all subjects of study are of equal educative value. Although not explicitly stated by opponents of the system, this is implied in the extract just quoted, and it is furthermore assumed as a negative argument by a great many advocates of the system in their assertion that "snap" courses should be eliminated—that is, that all subjects can and should be made equally difficult and consequently equally valuable from the standpoint of "discipline." The question involves the theory of disciplinary values, which cannot be discussed at this time, but it is interesting to note that the large majority of the correspondents assume (and often strenuously assert) that the subjects must be difficult of mastery if their full value as educative agencies is to be realized. How hard it is to equalize all subjects in point of difficulty is apparent to all who have tried to adjust high-school programmes, or who have sat through the periodic discussions of students' work in college faculty meetings. One principal, in answering the question, "Do electives tend to place a premium upon 'snap' courses?" affirms despairingly, "Yes, if you have 'snap' courses—and we have them in spite of ourselves." In the writer's experience, attempts to make all subjects equally difficult have generally proved abortive. They have commonly adopted the expedient of impos-

ing upon the pupil long assignments of reading that he cannot digest or the making of voluminous note-books that simply involve mechanical labor. In other words, while the time that is to be "put in" in preparation for class work may be equalized for different subjects, the end is gained by imposing uneducative tasks. Some subjects seem inherently to be more difficult than others: they deal with abstract conceptions that demand closer and more sustained attention. The numerous researches upon fatigue seem unquestionably to have established this principle.

IV. The other objections that are either stated or implied in the correspondence may be briefly formulated. (1) The unrestricted application of the principle of election makes an illogical and incoherent course. The educative function of logical organization can scarcely be brought into question, for it has been demonstrated by accurate experiments that organization promotes the facility and ease with which the organized elements may be recalled when needed in the solution of actual situations. (2) The elective principle encourages "flitting about" from one department of knowledge or training to another, catering to the instinctive but often disastrous desire for change and variety, and precluding that persistent application to a single field of endeavor which, alone, will bring measurable results either in knowledge or in efficiency. (3) The elective principle demands theoretically a large school well manned with exceptionally capable teachers. Even under these conditions, the difficulties of properly supervising so many different lines of work are greatly increased over what they would be under a course or group programme; consequently the opportunities for "scamped" work are greatly multiplied.

On the whole, may it not reasonably be contended that the principle of "free" election, as applied both to the college and to the secondary school, marks a period of transition in educational development necessitated by the very wide and rapid extension of the privileges of secondary and higher education during the past three or four decades? On both types of institution, the material prosperity that has been the prime factor in this extension of educational privileges has made inordinate demands.

Both the college and the secondary school have found themselves face to face with a situation that demanded a radical readjustment of their methods and organization. The elective principle is the first vague effort at an adequate readjustment. Wherever it has been successfully applied, however, it has been at the price of most careful supervision and watchfulness. The prevailing opinion, both in the colleges and in the high schools, seems to be that the highest efficiency is correlated with the rigidly prescribed technical and vocational courses. As fast as these are differentiated and organized, therefore, one may expect the free election of subjects to become less and less necessary for meeting social needs.

This tendency toward vocational and technical courses, however, brings into prominence a question that must be answered sooner or later. If the idea of a "general" education is not to be abandoned entirely, a sounder principle than that of "free" election must be found upon which to base it. The wide diversity of opinion among the correspondents who have been quoted above indicates a most pressing need for the investigation of educational values. Indeed, it is not too much to say that upon the solution of this perplexing problem, further advances in the organization of curricula absolutely depend.